

## **SHARP State of Washington Hospital Hand Care Survey 2000: Summary of Results**

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This survey was conducted to gather information on the use of hand washing agents, gloves and moisturizers available in Washington State hospitals. The information was used to help develop educational materials addressing the prevention of hand dermatitis in the health care setting. Survey responses were obtained for all 106 hospitals in Washington with a 100% response rate. An infection control or employee health specialist working for the hospital facility was contacted by phone and interviewed by the same Safety and Health Assessment and Research for Prevention (SHARP) epidemiologist. The following results were obtained.

The majority of the hospitals were licensed or Medicare certified acute care facilities. In addition to acute care facilities, five Veterans Administration Medical Centers, three military hospitals and four psychiatric care facilities were also contacted (Table 1). Most of the hospitals (70.2%) contacted had 200 or less registered hospital beds (Table 2).

**Table 1. Hospitals in Washington Surveyed (n=106)**

<b>Type of Hospital</b>	<b>Number (%)</b>
Licensed and/or Medicare Certified	94 (88.7)
Veterans Administration Medical Center	5 (4.7)
Military Hospital	3 (2.8)
Psychiatric Hospital	4 (3.8)

**Table 2. Size of Hospitals Surveyed (n=106)**

<b>Number of Registered Hospital Beds: (Range 15-1100)</b>	<b>Number of Hospitals (%)</b>
<= 50	31 (29.2)
51-100	22 (21.0)
101-200	21 (20.0)
201-300	13 (12.3)
301-400	8 (7.5)
401-500	8 (7.5)
> 501	3 (2.8)

There were a total of 93 people interviewed with information about all the 106 hospitals. Nine infection control specialists worked for multiple hospitals. The majority of the specialists answering the survey were in infection control (95%) (Table 3).

**Table 3. Personnel Contacted for Survey (n=93)**

Personnel	Number
Infection Control Specialist	88
Employee Health Specialist	3
Available Nurse, not with Infection Control	2

The 91 infection control/employee health specialists were surveyed regarding the awareness of issues relating to the use of moisturizers. These issues are addressed in the Occupational Safety and Health Administration (OSHA) 1999 Enforcement Procedures for the Occupational Exposure to Bloodborne Pathogens and in the Association for Professionals in Infection Control and Epidemiology (APIC) 1995 *APIC Guideline for Hand Washing and Hand Antisepsis in Health-Care Settings*. The awareness issues are listed in Table 4.

**Table 4. Awareness of Moisturizer Issues: OSHA and APIC  
91 Responses from Infection Control/Employee Health Specialists**

Issue	Aware (%)
Occupational Safety and Health Administration (OSHA) recommendation to avoid using some petroleum-based moisturizers with latex gloves	64 (74)
Chlorhexidine gluconate's (CHG) residual antibacterial effect on the skin inactivated by some anionic moisturizers	44 (48)

The type of hand washing products used throughout the hospitals varied (Table 5).

- Thirteen hospitals (12.3%) used a nonmicrobial hand washing product for the hospital personnel (except in the surgical suites).
- Twenty-four hospitals used a nonmicrobial hand washing product throughout the hospital but antimicrobial(s) agents in special units of the hospital (isolation, nursery, ICU, etc). Chlorhexidine gluconate (CHG) was the hand washing agent most often used (13/24).
- Antimicrobial hand washing agents were supplied to all areas of the health care facility in 69 Washington hospitals. Parachlorometaxylenol (PCMX) was the most frequently used antimicrobial agent (36/69).
- When a combination of antimicrobial hand washing agents were used in the hospital (one on medical/surgical floors, another type on special units), CHG was always the hand washing agent used in the special units.

**Table 5. Type of Hand Washing Agents Used by Nursing Personnel in Washington Hospitals (n=106)**

Type of Hand Washing Agent *	Number (%)	CHG (1)	PCMX (2)	Triclosan (3)
Nonantimicrobial	13 (12.3)			
Nonantimicrobial and antimicrobial	12 (11.3)	7	2	3
Nonantimicrobial medical/surgical floors and antimicrobial(s) in special units or situations**	24 (22.6)	13	6	6
Antimicrobial	47 (44.3)	5	28	14
Antimicrobial, CHG special units only	9 (8.5)	9 (special units)	6	3
Mixed use of nonantimicrobial and antimicrobial, CHG in special units only	1 (0.9)	1 (special units)		1

(1) CHG was typically used between 2% and 4% concentration

(2) PCMX was typically used between 0.5% and 1% concentration

(3) Triclosan was typically between 0.25% and 1% concentration

\* Used throughout the hospital unless otherwise noted

\*\*Special units/situations refer to the nursery, ICU, isolation, labor and delivery suites, etc.

In the course of the survey interviews, a number of infection control specialists reported using the alcohol sanitizing emulsion gel products in their facilities. Survey questions were added to assess the use of alcohol sanitizing emulsion gels. This was done after one third of the hospitals had been contacted (Table 6).

**Table 6. Use of Alcohol Sanitizing Emulsion Gels**

Availability	Number (%)
Throughout the hospital	24 (33.3)
Special areas (ICU, nursery)	3 (4.2)
Trial basis	4 (5.6)
Where there are no sinks	3 (4.2)
Not used	38 (52.7)

Of the 72 infection control specialists surveyed, 24 (33%) reported alcohol sanitizing emulsion gels were available for use throughout the hospital facility. This product was not available for use in 38 of the 72 hospitals (52.7%) surveyed.

- There was a favorable response to the use of these gels stating that they were not drying and were able to decrease the frequency of exposure to water and hand washes.
- The infection control specialists emphasized that the product was used only when the hands were not visibly soiled with infectious material or bodily fluids. They also were aware that washing with soap and water was necessary to remove build up of the gel, moisturizers or any type of bodily fluid the personnel may have come in contact with when using the gel.

The type of gloves used in the hospitals is presented in Table 7.

- Nonlatex gloves were available in 75 hospitals without a special request by the employee.
- Eleven of these hospitals were moving towards having the entire hospital using nonlatex gloves and seven hospitals had latex gloves available only in the operating rooms.
- Some form of latex gloves (powdered or powder free) were in use in 95 of the hospitals.
- Powder free latex gloves were routinely available in 66 hospitals.

**Table 7: Type of Gloves Used in Hospitals in Washington (n=106)**

Type of Gloves	Type of Latex Gloves	Number of Hospitals (%)
Latex	Powdered	5 (4.7)
	Powdered and powder-free	3 (2.8)
	Powder-free	18 (17.0)
Mixed: Latex and Non-latex (vinyl and/or nitrile)	Powdered	1/5*
	Powdered and powder-free	3 (2.8)
	Powder-free	42 (39.6)
Non-latex	Phasing out latex	11 (10.4)
	Operating rooms only per doctors' request	7 (6.6)
	Exclusively non-latex	11 (10.4)

\*Non-latex gloves available on request for 5 hospitals

The use of moisturizers for the hospital personnel is presented in Table 8.

- Moisturizers were not supplied for routine use for hospital personnel in 39% of the hospitals surveyed.
- Of the 65 hospitals that supplied a moisturizer product, 57 (88%) used a product that was compatible with the use of latex gloves and CHG hand washing agents.

- Eight hospitals supplied a moisturizer that was not compatible with CHG or the type of emulsifier in the moisturizer was unknown. In all 8 cases, CHG antimicrobial hand washing agents were not in use in the hospital.

**Table 8. Moisturizers That Were Available for Use by Nursing Personnel in Washington Hospitals (n=106)**

<b>Types of Moisturizers That Were Available</b>	<b>Number (%)</b>
None recommended or supplied	41 (39.0)
Supplied and compatible with latex gloves and CHG	57 (53.8)
Supplied, compatible with latex gloves but not CHG (Hospital not currently using CHG)	5 (4.7)
Supplied, compatible with latex gloves, no information available on product compatibility with CHG (Hospital not currently using CHG)	3 (2.8)

## Conclusions

- Many of the infection control specialists were aware of the issue surrounding the use of petroleum-based moisturizers and incompatibility with wearing latex gloves. Less than half were aware of anionic moisturizers potentially inactivating the residual antibacterial effect of CHG on the skin.
- The majority of hospitals that utilized an antimicrobial hand washing agent throughout the medical/surgical floors used products that contain PCMX as the antimicrobial agent. Thirty three per cent of the hospitals had CHG available in some areas of the hospital as a hand washing agent.
- Alcohol sanitizing emollient gels were not available on a routine basis in the majority of the hospitals that were surveyed.
- Latex gloves were still available in 95 hospitals. Most hospitals supplied the powder free variety. Non-latex gloves were available in addition to/or in lieu of latex gloves for health care personnel on a routine basis in 75 hospitals.
- Moisturizers were supplied by 61% of the hospitals for their health care personnel.

In conclusion, many hospitals have latex gloves available for use and a significant number use CHG as a hand washing agent in some area of the hospital (exclusive of the operating room suites). The awareness of the issues of the compatibility of a moisturizing product with latex gloves and CHG becomes a factor in preventing hand dermatitis in health care personnel. The creation of a list of moisturizing products and their chemical properties should be a helpful adjunct for infection control specialists when making recommendations for use of these products in health care facilities.

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## EXAMPLE OF SURVEY

(Please do not reply.)

SHARP State of Washington Hospital Survey 2000:

Hand Wash, Alcohol Gels, Glove Types, Moisturizers, Issues Concerning Use of  
Moisturizers and Latex Gloves and Chlorhexidine Gluconate

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Hospital \_\_\_\_\_

Phone Number \_\_\_\_\_

Number of Registered Beds \_\_\_\_\_

Name \_\_\_\_\_

1. Person answering survey questions:
  - a. Infection Control
  - b. Employee Health Nurse
  - c. Nurse other than IC/EHN
2. What type of hand washing agents do the nursing personnel use? (More than one answer possible)
  - a. Nonantimicrobial?                      Where in the hospital is it used?
  - b. Antimicrobial?                      Name of the Antimicrobial Agent?  
Where in the hospital is it used?
3. Are alcohol gels available for use? **[Not asked of the first 34 persons in the survey]**
  - a. Routine basis
  - b. Only in certain units of the hospital (ICU, nursery, labor and delivery)
  - c. Only where there are no sinks available
  - d. Not used on a routine basis or only when water supply is shut off
4. What types of gloves are available for use in the hospital? (More than one answer possible)
  - a. Powdered latex
  - b. Powder-free latex
  - c. Nonlatex
  - d. Nonlatex available but only per special request
5. Does your hospital have a moisturizer available for the nursing personnel to use?
  - a. None available/recommended
  - b. Brand of moisturizer supplied by hospital
6. Are you aware of the OSHA recommendation regarding avoiding the use of some petroleum-based moisturizers and latex gloves?
  - a. Yes                      b. No
7. Are you aware of the problem of using a chlorhexidine gluconate (CHG) hand washing agent followed by the use of an anionic moisturizer that may inactivate the residual antibacterial effect of CHG?
  - a. Yes                      b. No